

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/828,518	YOO, WOO SIK	
	Examiner Olivia T Luk	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 8/18/03.
  2.  The allowed claim(s) is/are 1-7, 16 and 23-28.
  3.  The drawings filed on 8/28/02 are accepted by the Examiner.
  4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a)  All
    - b)  Some\*
    - c)  None
 of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
    - (a)  The translation of the foreign language provisional application has been received.
  6.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8.  CORRECTED DRAWINGS must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No. \_\_\_\_\_.
  - (b)  including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

- |  |   |
|--|---|
| <input type="checkbox"/> Notice of References Cited (PTO-892)  | <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____.            |
| <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____.              | <input type="checkbox"/> Examiner's Amendment/Comment                             |
| <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | <input type="checkbox"/> Other  |

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1-7, 16, 23-28 are allowed.
2. The following is an examiner's statement of reasons for allowance: Prior art of record teach introducing vapor-phase chemicals taken from the group consisting of NH<sub>3</sub>, N<sub>2</sub>O, SiF<sub>4</sub>, SiH<sub>4</sub>, TiCl<sub>4</sub>, N<sub>2</sub>, Ar, HCl, and SiCl<sub>4</sub> and including pure H<sub>2</sub> gas into a reactor with sufficient supplied energy to cause a first reaction in said reactor; exhausting gases from said reactor resulting from said first reaction; separating a non-purified hydrogen gas from said exhausted gases; venting said exhausted gases free of said non-purified hydrogen, but uses that hydrogen as fuel. (Carson, col. 4, lines 42-43). Carson fails to teach recycling of H<sub>2</sub> includes controlling the venting so as to maintain a particular concentration of hydrogen in the system; specifically, venting only gases which are free of H<sub>2</sub>. There is not enough evidence to prove obviousness to combine a hydrogen conservation system used in petrochemical plants disclosed in Carson with the thin film deposition system disclosed in Cadgil.

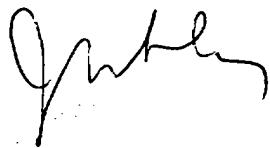
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olivia T Luk whose telephone number is 703-305-3420. The examiner can normally be reached on 7AM to 4PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on 703-308-3325. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



OTL  
September 11, 2003